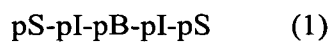


## ATSTRACT

The present invention relates to a ternary copolymer represented by the following formula (1) of the penta-block structure, wherein the molecular weight is 50,000 to 400,000, pB is more than 70% of 1,4 structure, the content of pS is in range of 5% to 50%, and pB and pI are in a weight ratio of  $pB/pI \geq 1$ .



Wherein, pS is vinyl aromatic polymer, pB is polybutadiene and pI is polyisoprene.

The block copolymer in the present invention with the structure, in which polyisoprene block is inserted between vinyl aromatic polymer block and polybutadiene block, has high mechanical properties such as tensile strength. The manufacturing method of the ternary block copolymer with penta-block structure is also provided.